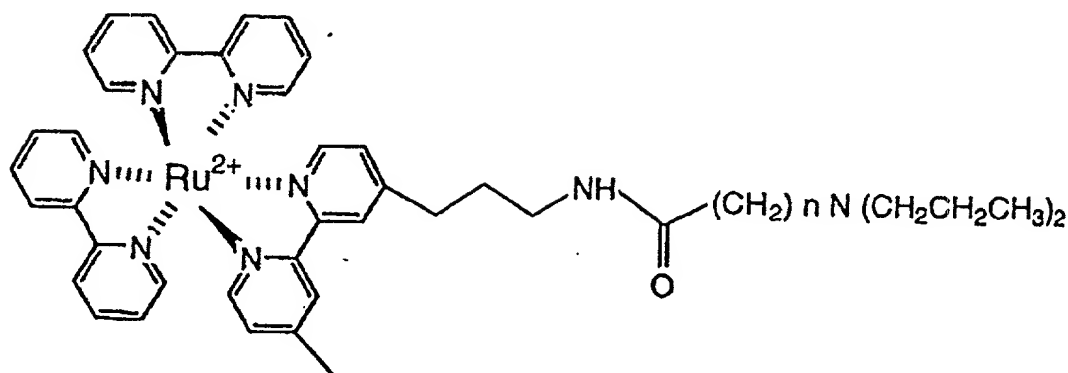


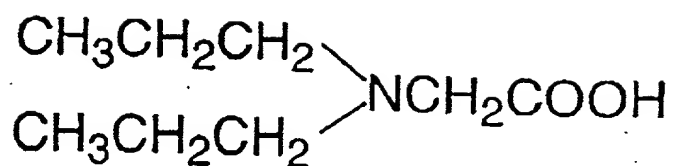
Amino-tag

DIPIC/NMM/HOBT/DMF

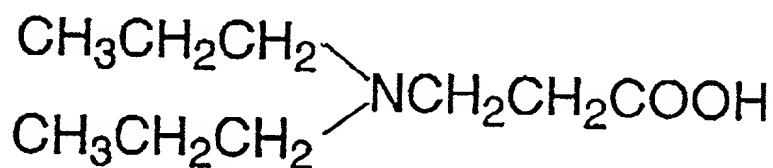


TPA-tag Conjugates

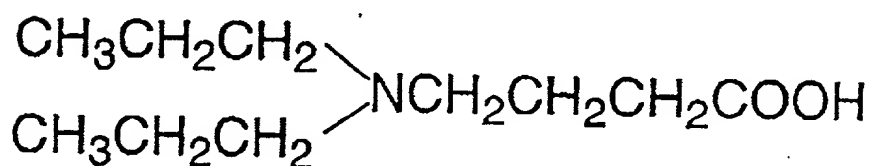
Fig. 1 Scheme for the synthesis of Ru-tag/TPA conjugates



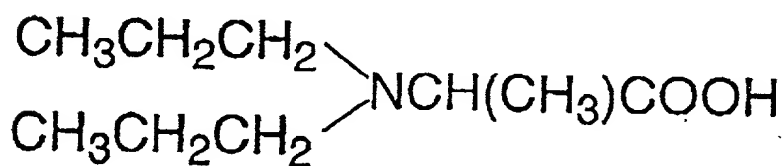
Di-n-propylaminoacetic acid (No.1)



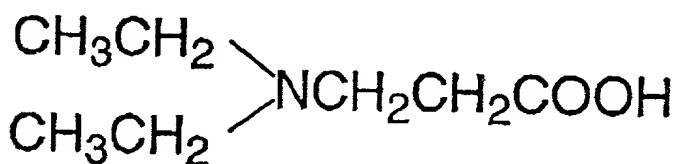
3-Di-n-propylaminopropionic acid (No.2)



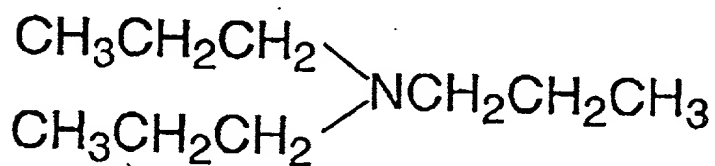
4-Di-n-propylaminobutyric acid (No.3)



N,N-Dipropyl-L-alanine (Ala)



3-(Diethylamino)propionic acid (DEPA)



Tripropylamine (TPA)

Fig. 2 Structure of Tertiary Amines used

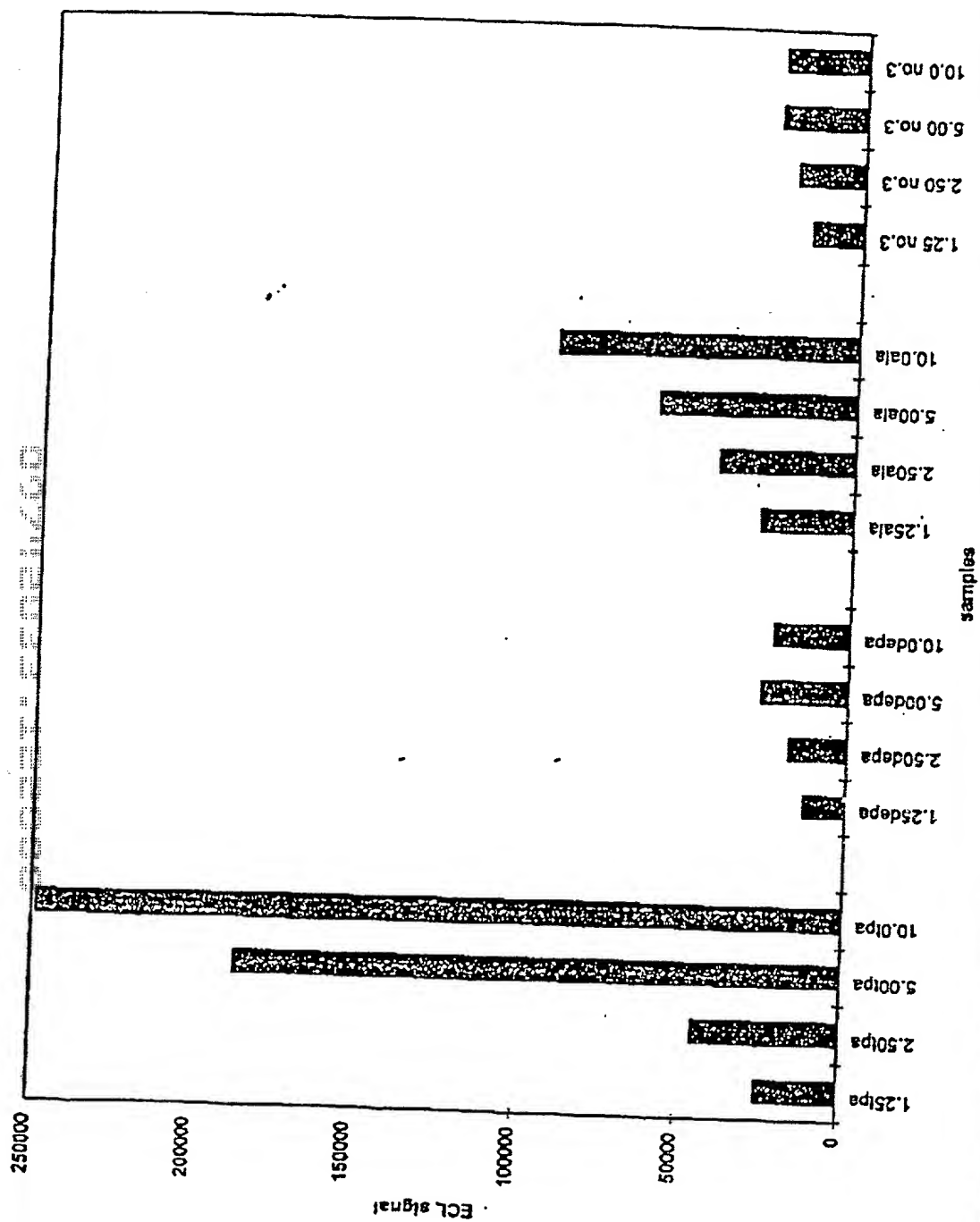
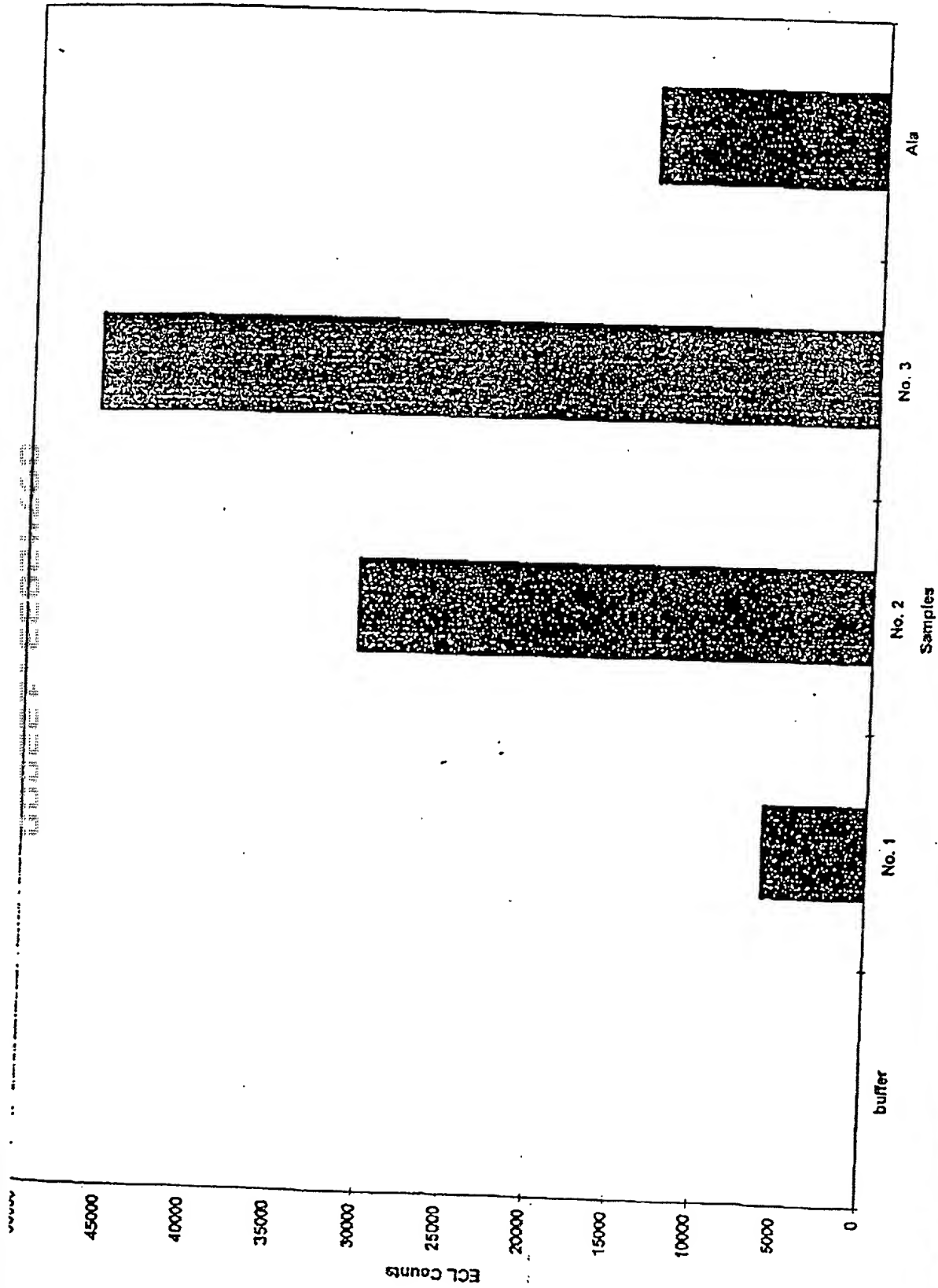


Fig. 3 Comparison of the ECL assay results from free tag and different organic amines. The free tag was 2.75  $\mu$ M and the organic amine concentrations were 1.25, 2.5, 5.0, and 10 mM in 25 mM sodium phosphate (pH=7.0). The structure of each organic amine was shown in Fig. 2.



4  
 Fig. 3 ECL assay results for the various reagents synthesized. The samples used were 5  $\mu$ M for each compound in 25 mM phosphate buffer (pH=7.0) and the sample ID refers to the TPA analog moiety in the conjugate (see Fig. 2).

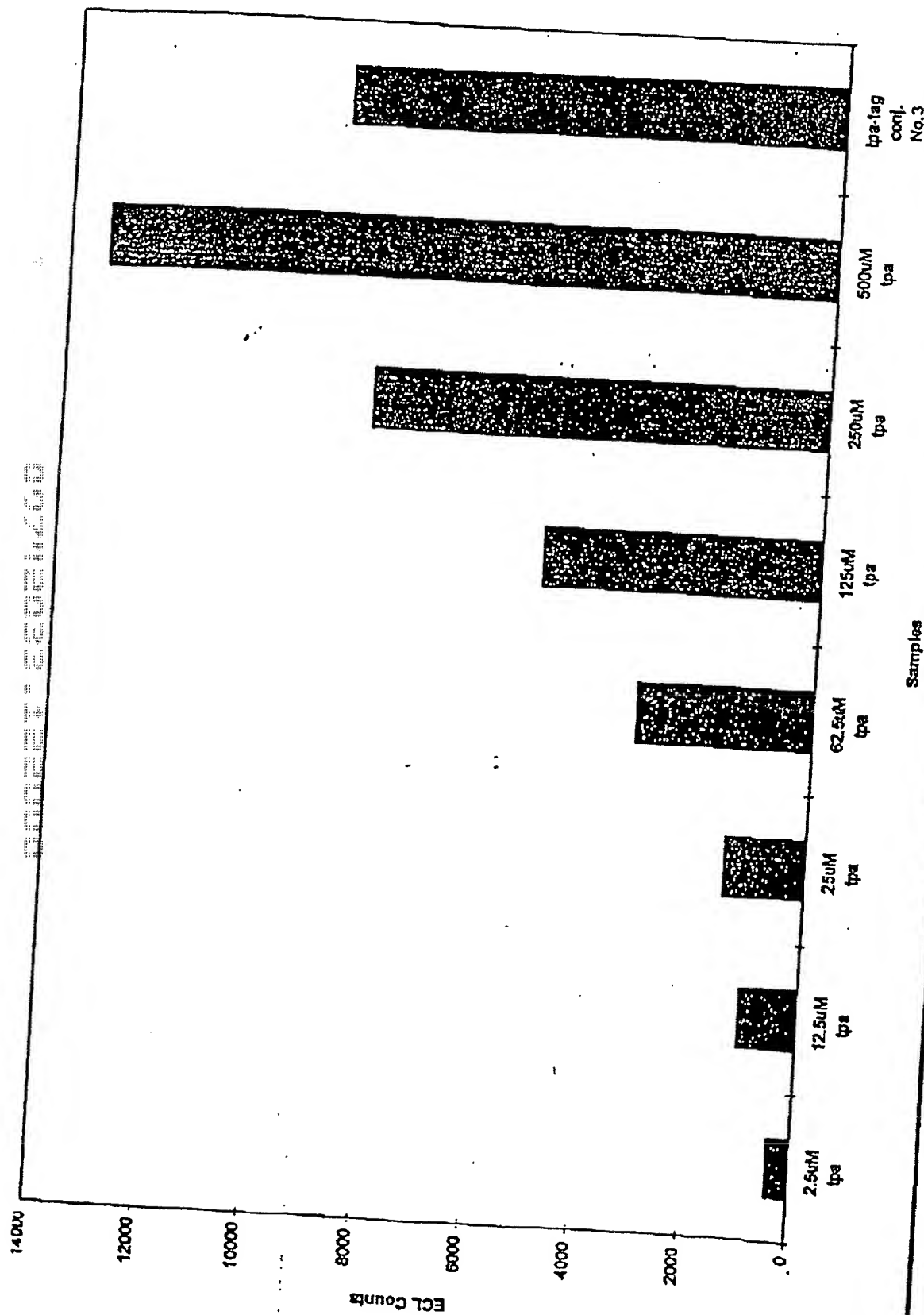


Fig. 4<sup>5</sup> Comparison of the ECL assay results between uni- and bimolecular system. In the bimolecular system, 2.5  $\mu$ M free tag was mixed with 2.5, 12.5, 25, 62.5, 125, 250 and 500  $\mu$ M TPA, respectively. 2.5  $\mu$ M TPA-tag conjugate (No.3) was used for the unimolecular reagent.

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